FACT SHEET

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THE WELCH SCIENTIFIC COMPANY

A Fact Sheet

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August, 1964

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INTRODUCTION

Welch has long been one of the best-known manufacturers of scientific instruments, laboratory apparatus and supplies for use in teaching science courses.

Experience in this field has led it to other product lines in the field of education as well as in industry. Its more than 15,000 products currently range from test tubes to biological models and from vacuum pumps to instructional computers.

With a basic knowledge of science becoming almost essential in the modern world and with increasing emphasis on science in schools and universities, Welch holds a vital position in the scientific-educational field.

Likewise in industry, where rapidly increasing technological refinement of manufacturing processes is generating a growing demand for complex, precise instruments and production tools, Welch has established itself as a leading supplier of specialized products. Its vacuum pumps, for example, are vital in television and X-ray tube manufacture, penicillin and blood plasma production, atom smashing and space simulation.

The company is on the verge of becoming an even more potent factor in a segment of the economy which expects U. S. pre-college and college enrollments to double current totals (47,000,000 and 4,600,000, respectively) within 10 years.

WELCH SCIENTIFIC BRIEFS

1. The company was founded in 1880--by a 24-year-old Iowa school superintendent, the father of current president Richard E. Welch, Sr.

2. The company produced the nation's first elementary school diplomas.

3. The company's products are used primarily in teaching chemistry, physics, biology and other sciences as well as in various research and industrial applications.

4. More than 15,000 items, including simple laboratory equipment, mathematical models, electric and electronic teaching devices and instruments for measuring properties of atomic particles, are listed in the company's catalog.

5. Approximately 70 per cent of Welch's sales are made to more than 20,000 educational institutions, primarily high schools; 25 per cent to industrial customers, and 5 per cent to government agencies.

6. A fully integrated graphic arts department produces diplomas, the current events publication "World News of the Week," educational and scientific charts and the company's 900-page catalog. Since 1924, "The Periodic Chart of the Atoms" published by Welch has been recognized as the most comprehensive presentation of the Periodic Table.

7. The company's line of Duo-Seal vacuum pumps is recognized throughout the world for quality performance. Used by more than 10,000 customers, these pumps account for a substantial and growing percentage of sales.

8. The company's Turbo-Molecular pump, introduced in 1961, has a pumping capacity of 4,000 liters per second and can maintain the extremely high vacuum required in space simulation chambers.

9. Welch Scientific's main facility is a 485,000-square-foot plant and office structure at Skokie, Ill. The company also has a small manufacturing, service and warehouse operation in New York City; a sales and service center in San Carlos, Calif., and a sales office in North Hollywood, Calif. The recently established Welch Scientific Company of Canada Ltd. handles distribution in the eastern provinces.

10. Welch-manufactured items, including many proprietary products, accounted for more than 65 per cent of sales in 1963.

11. Sales in 1963 were $17,237,439, compared with $16,994,059 in 1962. Net income in 1963 was $1,403,667 or 78 cents per share, compared with $1,361,720, or 76 cents per share, in 1963.

12. There are 1,800,000 shares of common stock outstanding, about two-thirds of which is closely held. Shares are traded on the New York Stock Exchange.

13. In a series of major management changes in March, 1964, Richard E. Welch, Sr., executive vice president since 1961, was elected president and chief executive officer, succeeding

Medard W. Welch, who was named chairman of the board. The board was enlarged from seven to nine members, with the result that non-family members now comprise a majority.

14. The first step in a long-range acquisition program, to which the new management is committed, was taken May 1, 1964, when the company purchased for cash the Toronto distribution facilities of Cave and Company Ltd. and established Welch Scientific Company of Canada Ltd.

15. In another move under the new administration, Welch Scientific was appointed exclusive national distributor of teaching machines manufactured by the Educational Science Division of U. S. Industries, Inc. The teaching machine is expected to become a major Welch product within the next few years.

BRIEF HISTORY OF THE COMPANY

The company was founded in 1880 by a 24-year-old Iowa teacher who had seen the inadequacy of teaching aids from the vantage point of a one-room country school.

Born on a Pennsylvania farm during a westward covered wagon trek, young W. M. Welch from his earliest days possessed an intense desire both to learn and to improve educational methods.

As a rural teacher in Jackson County, Iowa, he had deplored the lack of standardized records which made it impossible for a new teacher to know what previous instruction pupils had completed. He designed a school record-keeping system which was later to be universally adopted throughout the rural Midwest.

School records thus became the earliest commercial venture of the infant Welch enterprise at Anamosa, Iowa.

In the early years, the founder also designed and made the nation's first elementary school diplomas, because he believed that such tangible rewards would stimulate scholarship.

However, despite pioneer achievements and considerable early growth, the Iowa company had to be reorganized. The founder moved to Chicago and in 1906 incorporated the W. M. Welch Manufacturing Company, a new concern under Illinois charter.

Two years later the purchase of the Edward P. Martin Company marked Welch's entry into the scientific and educational field.

In subsequent years, the Welch line was gradually augmented by proprietary products for the physics, chemistry, biology and general science fields.

Welch introduced its first "Periodic Chart of the Atoms" in 1924 and ever since has been recognized as publisher of the most comprehensive presentation of the Mendeleev table. This chart has become a familiar background for pictures of Nobel prize-winning scientists appearing on the covers of TIME and other magazines.

The launching of Sputnik in 1957 triggered large outlays of federal funds for scientific education and consequent sharp rises in the company's sales volume. In September, 1958, the National Defense Education Act was enacted and by mid-1959 federal monies, matched 50-50 with state and local funds, flowed into the school systems of America.

Welch sales soared to a record $19,481,089 in 1960, but the success was short-lived. Management had been slow to realize that necessary expansion in a burgeoning market could not be accomplished solely out of retained earnings. The company had not kept pace with modern marketing trends.

Construction of a new, modern, unified manufacturing facility at Skokie, Ill., was begun in 1960. However, as earnings declined, a conflict grew between two factions of the Welch family, each of whom controlled about one-third of the company stock, over management policies.

This conflict was resolved in January, 1964, by an agreement which established Richard E. Welch, Sr., as president and chief executive officer enlarged the board of directors from seven to nine members, replaced three outside directors with a younger five-man group, and committed the cash-strong company, among other things, to a program of acquisition tailored to provide an improved marketing picture and improved profits. The cash purchase of the Toronto branch of Cave and Company Ltd., and establishment of Welch Scientific Company of Canada Ltd., in May, 1964, represented the first step in this direction.

The company name was changed to The Welch Scientific Company in 1960. Its stock was first offered to the public in 1961 and became listed on the New York Stock Exchange in 1963.

A producer and supplier of excellent reputation, Welch Scientific has identified its corporate problems and is attacking them with modern weapons. Among the company's best allies are two long-range trends. One shows school populations almost doubling in the next decade. Another shows annual elementary-secondary school and college-university spending rates increasing by 11 and 16 per cent, respectively, over the next 10 years, compared with only 6 per cent for gross national product.

OPERATIONS

The company's principal operations are:

--the manufacturing and merchandising of scientific and educational equipment,

--the manufacturing of Duo-Seal mechanical high-vacuum pumps,

--the engraving, printing and specialty binding of diplomas and

--the printing and publishing of educational charts and the current events publication "World News of the Week."

More than 65 per cent of company sales are derived from manufactured products. Selling is conducted primarily by direct mail distribution of catalogs and other literature as well as through dealers and sales representatives.

Scientific and Educational Products

These items range from simple clamps, stands and glassware to complex devices incorporating electronic components.

In the field of physics, Welch sells apparatus for teaching mechanics, heat, light, sound, electricity, properties of matter, solids, liquids and gases, magentism, electronics and nuclear physics. Among typical teaching products in this area are electrical measuring instruments, barometers, grating spectrometers, optical benches, Vande Graaff-type electrostatic generators, oscilloscopes, vacuum pumps and balances.

Apparatus for chemistry laboratories includes fine analytical balances, weights and scales. Supplies such as chemicals, laboratory glassware, burettes, clamps, porcelain ware, condensers, rubber tubing, stoppers and corks are also included in the general catalog.

Biology apparatus includes microscopes; microprojectors; botanical, zoological and anatomical plastic models; charts, and specimens of living and preserved materials.

The company sells, and lists in its special mathematics catalog, instruments and models for demonstrating the principles of plane and solid geometry. It also offers numerous other items for mathematics laboratories.

Vacuum Pumps

Though vacuum pumps have long been produced for use in school laboratories, this line of products has become important by itself. Marketed under the name Duo-Seal, these high-quality mechanical pumps now account for a substantial percentage of sales, and their contribution has been rising yearly.

Ten different basic models are produced, ranging from 21 liters to 1,400 liters free air capacity per minute. Most of these pumps are guaranteed to produce a vacuum of one-tenth micron.

The company's Turbo-Molecular pump has a pumping capacity of 4,000 liters per second and can maintain the ultra-high vacuum required for space simulation chambers and thin-film solid state research.

The increasing production of highly complex products, especially by the electronics industry, has depended to a large degree on the development of advanced vacuum technology. Welch pumps are vital in solid state physics studies of the fundamental structure of solid matter and are used in the plasma studies of space vehicle propulsion by electrically charged gases.

Still another important role played by Welch pumps is in cryogenic (extremely low temperature) applications. The pumps are also essential components of many electronic instruments such as the mass-spectrometer, electron microscope and ultra-high-speed centrifuge.

Welch vacuum pumps are used in many industrial processes, including vacuum dehydration, distillation, metallurgy, lens coating and vacuum chemistry. They are used in the production of radio and television tubes, X-ray tubes and metal deposition and refining devices.

Graphic Arts Products

The company produces diplomas for more than 7,000 high schools and many college and universities. It also produces a wide range of scientific and educational charts used primarily for teaching the various sciences. In addition, it prints the publication "World News of the Week," which is mailed to approximately 15,000 schools for current events study.

Other matter printed by the department includes the Welch Catalog, the Welch Physics and Chemistry Digests, the Welch Biology and General Science Digests, the Welch School Administrators' Digest and the Duo-Seal Digest. The Digests contain articles of interest to science teachers, school administrators and vacuum technologists and, in addition, advertise company products.

While not in itself a major segment of the company's business, the Densichron is worthy of special mention. This Welch product detects and measures light densities. One important user is the graphic arts industry where a model for printers makes possible a positive color control through precise reflection measurements of ink film thickness. Densichrons are also used in commercial photography--both in black-and-white and color work--and in a widening range of research and industrial applications.

FINANCIAL DATA

Sales--Earnings--Dividends

Net sales in 1963 totaled $17,237,000, compared with $16,994,000 in 1962. Net income in 1963 reached $1,403,000, or 78 cents per share, a slight increase over the $1,361,000, 76 cents per share, reported in the preceeding year.

Net income amounted to 8.1 per cent of sales in 1963, compared with 8 per cent in 1962.

The dividend rate in 1963 was 25 cents per share, the same as in 1962. This constituted a 32 per cent payout of earnings.

Financial Condition

At the end of 1963, current assets totaled $11,522,000 and current liabilities $1,658,000 for a current ratio of 6.9 to 1. Working capital amounted to $9,864,000. Cash totaled $855,000 and holdings of U. S. Government securities $2,573,000.

Receivables, less allowances for doubtful accounts, increased to $3,766,000 at the end of 1963, up approximately $263,000 during the year. Inventories also showed a net increase (mostly in work in process and raw materials) to $4,215,000, compared with $3,949,000 at the end of the prior year.

The company holds a strong cash position and has no long-term debt.

Capitalization and Company Stock

Capitalization consists of 1,800,000 shares of $1 par common stock outstanding and 12,000 shares of stock held in the treasury. Authorized shares total 4,000,000. Shareholders currently total about 4,300.

Until May 8, 1961, virtually all the company's stock was in the hands of five members of the Welch family. On this date, a public offering of 545,000 common shares was made with Hornblower & Weeks acting as the head underwriter. Priced to the public at $28 per share, the stock soared to $55 within an hour in one of the most dramatic movements in recent market history. Its 1964 price range has been 19 3/8 — 11 3/4.

Members of the Welch and Bro families control 69 per cent of the outstanding shares.

Five-Year Summary

	1963	1962	1961	1960	1959
Net sales	$17,237,439	$16,994,059	$18,281,494	$19,571,341	$13,522,780
Earnings before taxes	2,850,667	2,819,720	3,437,850	4,260,272	2,351,405
Income taxes	1,447,000	1,458,000	1,783,000	2,205,650	1,228,000
Net income	1,403,667	1,301,720	1,654,850	2,054,622	1,123,405
Net income per share*	.78	.76	.92	1.14	.62
Dividend per share*	.25	.25	.18-3/4	.03-3/4	.02-1/2
Current assets	11,522,960	11,679,648	11,010,189	10,902,742	7,087,710
Current liabilities	1,658,242	1,107,059	1,195,191	4,544,793	2,916,810
Working capital	9,864,718	10,572,589	9,814,998	6,357,949	4,170,900
Current ratio	6.9 to 1	10.5 to 1	9.2 to 1	2.4 to 1	2.4 to 1
Property, plant and equipment, Net	5,689,861	4,063,824	3,929,114	3,031,455	1,389,405
Depreciation	435,730	431,662	302,765	194,560	178,257
Long-term debt	---	---	7,873	1,560,707	69,207
Stockholders' equity	15,542,758	14,598,091	13,677,371	7,737,676	5,567,445

*Based on 1,800,000 shares outstanding December 31, 1963.

FACILITIES AND PERSONNEL

By the end of 1964, all Chicago-area administrative, manufacturing and warehousing activities will be transferred from several separate facilities on the city's north side to a single, modern, 485,000-square-foot plant in suburban Skokie, Ill.

Of this total, approximately 210,000 square feet were completed in 1961, and the balance will be finished and occupied during the third quarter of 1964.

The company operates a manufacturing-service-warehousing facility at 331 East 38th Street, New York City; a sales-service center at San Carlos, Calif.; and a sales office in North Hollywood, Calif. It has also become owner of a 70 per cent interest in a new Canadian enterprise, Welch Scientific Company of Canada Ltd. This firm, which has assumed control of established Toronto distribution facilities previously operated by Cave and Company Ltd., will market a complete line of educational and laboratory products in the eastern provinces.

Altogether, Welch Scientific has 25 laboratory supply distributors in major U. S. and Canadian cities. Total company employment is about 830.

TOP MANAGEMENT

As a result of shareholder action at the annual meeting March 20, 1964, a new slate of outside directors was named and board membership was increased from seven to nine.

Five of the new board members are outsiders, compared with three under the previous organization. They are:

Matthew L. Devine, president of Amphenol-Borg Electronics Corporation, Chicago;

David Graham, partner in the New York office of Hornblower & Weeks and former financial vice president of Standard Oil Company of Indiana;

Charles C. Jarchow, retired chairman of the board of Amsted Industries, Inc., Chicago;

Oliver H. Scharnberg, vice president of John P. Chase, Inc., Boston, Mass., and first vice president of Craftsman Life Insurance Co., Boston; and

Steven P. J. Wood, president of Warner Electric Brake & Clutch Company, Beloit Wis.

The four family members of the board are:

Medard W. Welch (the former president and chief executive officer), chairman;

Richard E. Welch, Sr., (the new president and chief executive officer);

Richard E. Welch, Jr.

Kenneth A. Bro

Following are brief biographies of the major company officers:

Richard E. Welch, Sr., president and chief executive officer as well as a long-time industry leader, joined the company in 1921. Five years later he became vice president and operating manager. He was made treasurer as well in 1933 and executive vice president in 1961. His responsibilities have included all manufacturing operations, product development, engineering, financial control, commercial and dealer sales, purchasing and industry association contacts. He has been a director of the Scientific Apparatus Makers Association (SAMA), which represents more than 90 per cent of the industry, for more than 20 years; served four years as president or president pro tem of this body; was twice chairman of its Laboratory Apparatus Section, and is currently a member of its finance committee. He holds several patents and has served on numerous industry-government committees. He is a graduate of the University of Michigan and has been active in civic, boys' club and church affairs.

Wilfrid Feckler, executive vice president, is a 38-year company veteran who started as an order picker in the chemical department. He became head of this department, then for many years was a key director of the scientific manufacturing, merchandising and product planning efforts. He also directed the vacuum pump division during its period of greatest expansion. A graduate of the University of Chicago, Feckler was elected to his current office in March, 1964.

Richard E. Welch, Jr., vice president--marketing and treasurer, joined the company in 1946 as a member of the engineering staff and was responsible for the development and promotion of the firm's mathematics teaching instruments. His career also includes assignments in the graphic arts department, purchasing, warehousing, manufacturing and industry representation. Until his current marketing appointment, he was in charge of purchasing, warehousing, graphic arts production, diploma sales, educational and scientific apparatus engineering, and union contract administration. He was elected vice president of the company in 1961. He has headed various committees of the Scientific Apparatus Makers Association, and from 1959 to 1962 he served on that body's executive committee. He attended the University of Texas and Northwestern University.

Kenneth A. Bro, administrative vice president and secretary, joined the company in 1949 as an engineering time study man. Since then, he has served in product evaluation, production control, purchasing, educational sales and advertising. In 1961 he was elected to his current officerships. Born in Tsingtao, China, of missionary parents, Bro lived in that country for six years. He is a graduate of Northwestern University; a trustee of Northland College, Ashland, Wis.; and a director of Barrett-Cravens Company, Northbrook, Ill., manufacturer of material handling equipment.